

Joint ANL/FNAL SCPF and BCP System Update

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AD/MSD

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UPW System

- System is operating and recirculating on itself
- Anion/cation and divalent metal concentration + dissolved silica tests were performed by installer. Results are within UPW quality specs.
- A second, more thorough test through Balazs Analytical Lab, verified that system produces UPW within specification.
- Official 'turn-on' occurred week of July 10, 2006.

BCP System

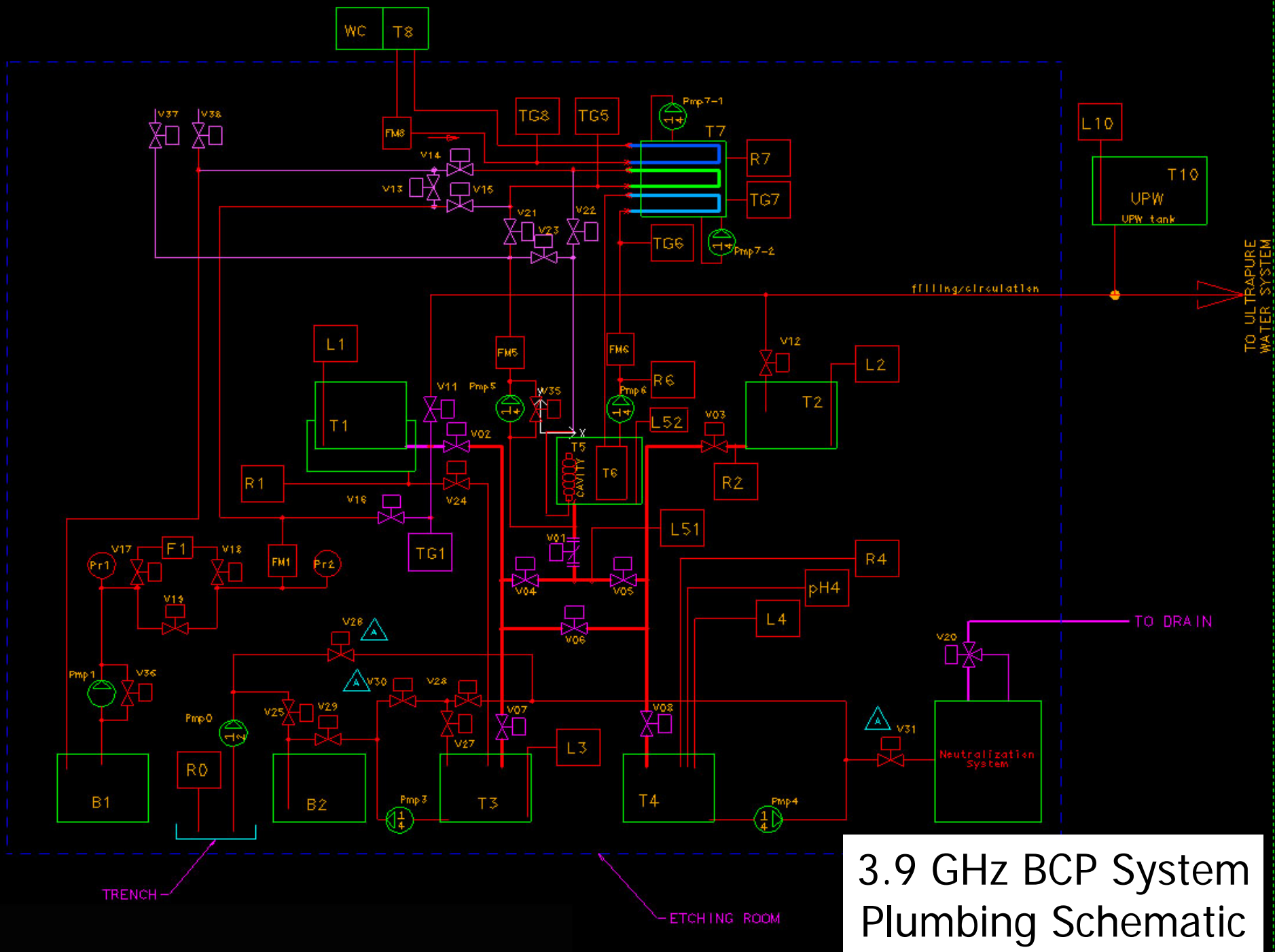
Where we were ~



3.9 GHz Processing
Setup

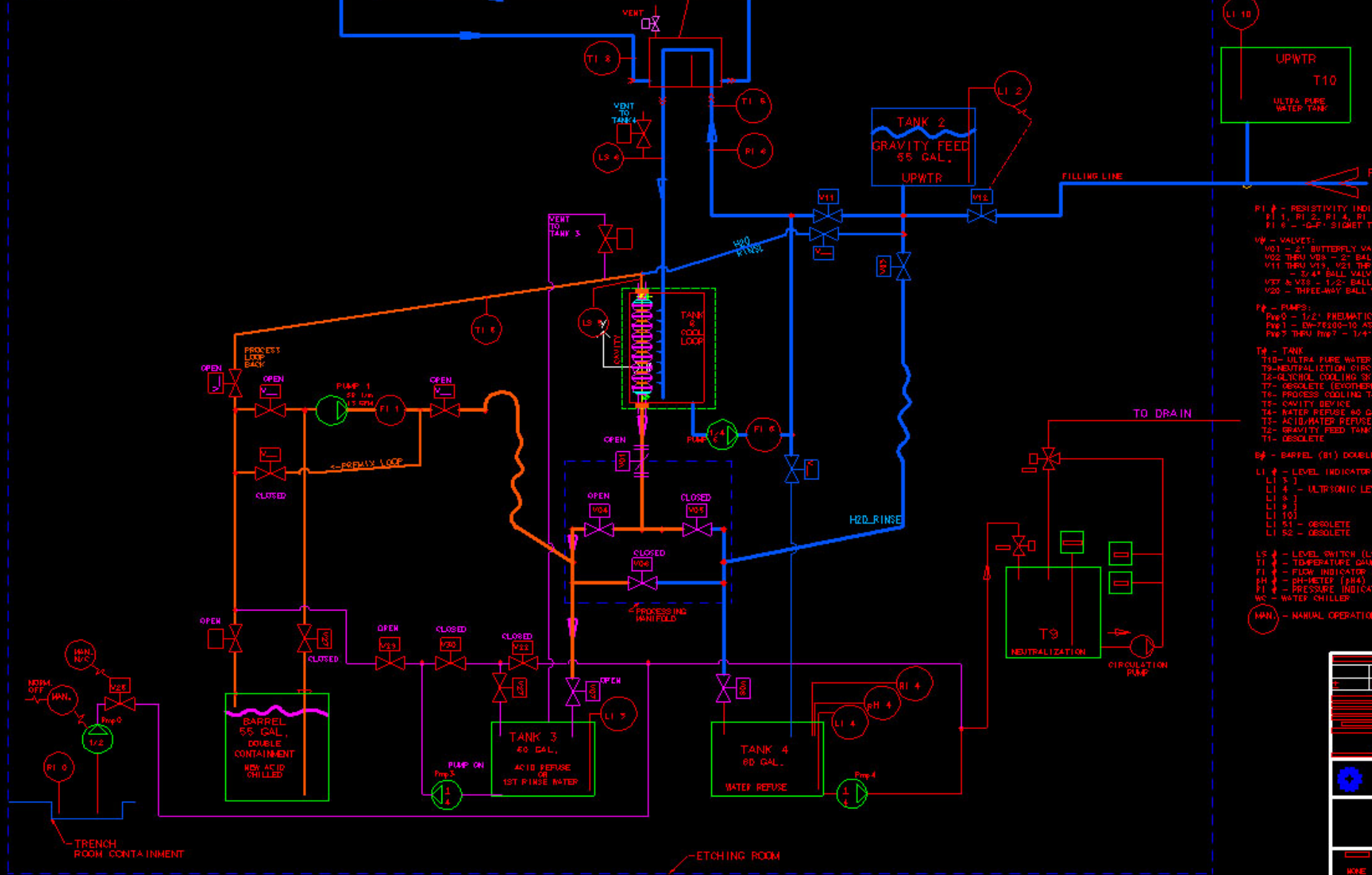
Full water commissioning revealed the following:

- Acid cooling scheme required modification
- Room egress was not within life-safety requirements
- Too many overhead lines
- Extra features in system could be eliminated to improve simplicity
- Large cavity handling required architectural change
- Controls simplifications required for operator 'comfort'



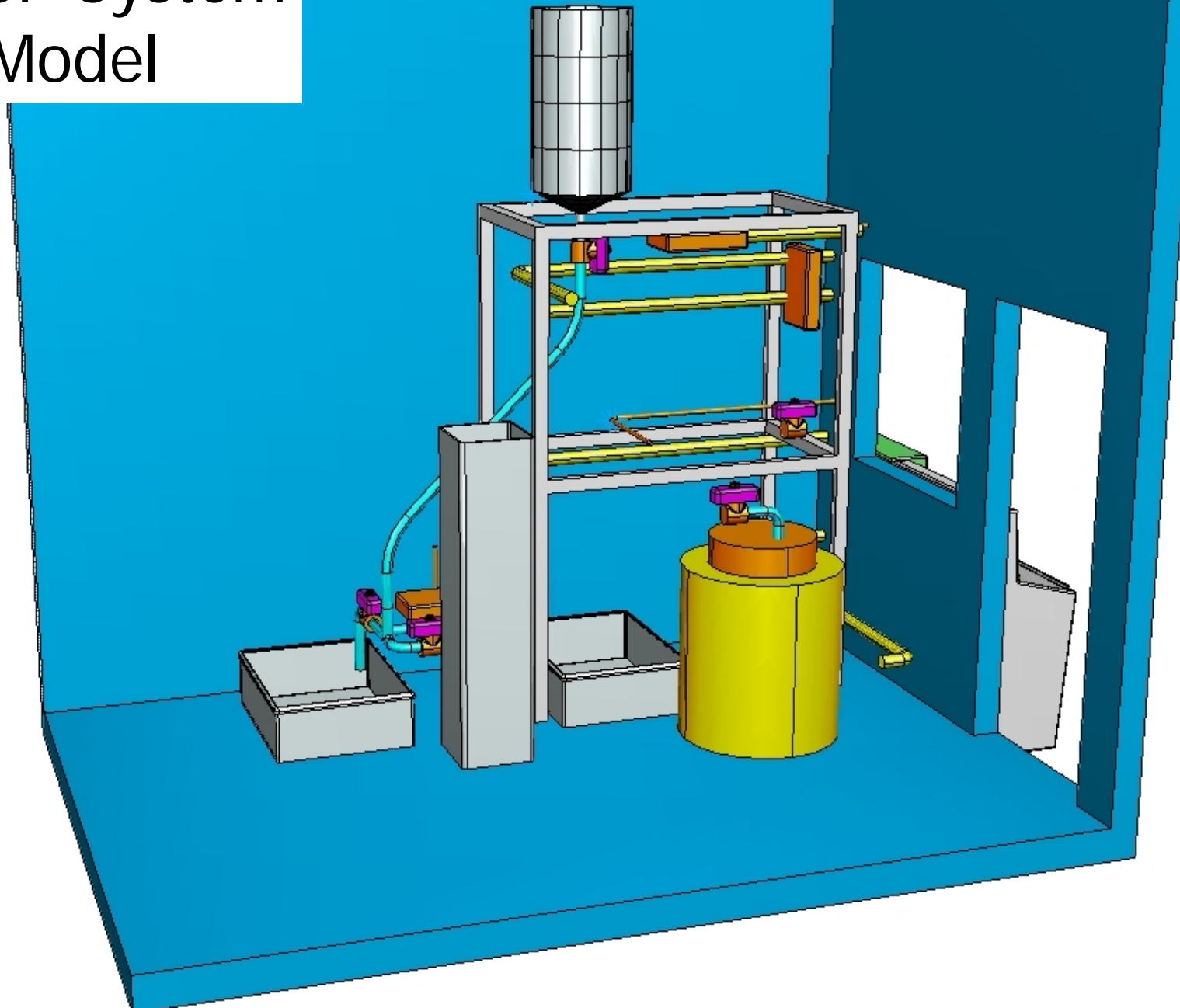
1.3 GHz BCP System Plumbing Schematic

NEMA CLASS 4
CHEMICAL ROOM



- FI 1 - PERISTALTIC INDICATOR
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- WC - WATER COOLER
T&S - TANK AND STRAINER
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- UPWTR - ULTRA PURE WATER TANK
T10 - TANK
ULTRA PURE WATER TANK
GRAVITY FEED 55 GAL.
FILLING LINE
TO DRAIN
CIRCULATION PUMP
T9 - TANK
NEUTRALIZATION
TRENCH ROOM CONTAINMENT
ETCHING ROOM

Partial BCP System 3D Model



BCP System---Major Improvements

- Eliminated residual acid storage in system
- Pre-cool and pre-meter acid
- Direct acid feed from supply drum
- Reduced acid/water plumbing
- Follows life-safety rules
- Simplified process heat exchange*
- Reduced overall system complexity
- Modified layout to accept 1.3 GHz cavities

BCP System---Costs & Manpower

- Estimated M&S remaining in FY06 = \$50k*
- Estimated SWF remaining in FY06 = 1.25 FTE

* At least 1 FTE and \$100k for cavity hardware and cleanroom gear will be required in FY'07